Amendments to the Specification

Please amend the paragraph [0008] as follows:

[0008] A first aspect of the invention provides a backlight device comprising: a light guide plate having a light incident face and a light emission face; a rotary member adapted to be rotated along a rotary shaft thereof and disposed opposite to the light incident face of the light guide plate; a rotary drive mechanism for rotating the rotary member; a plurality of mercury-free fluorescent lamps, each comprising an arc tube mounted on the rotary member so as to extend substantially parallel to the rotary shaft, a mercury-free discharge medium consisting essentially of a rare gas sealed within the arc tube, and first and second electrodes for exciting the discharge medium, the mercury-free fluorescent lamps being capable of emitting light of respectively different colors, and the emitted light entering the light guide plate through the light incident face and emerging ~~form~~ from the light emission face; and a power feed control mechanism for applying a voltage to the first and second electrodes of each of the mercury-free fluorescent lamps.

Please amend the paragraph [0018] as follows:

[0018] A second aspect of the invention provides a liquid crystal display apparatus comprising a liquid crystal display panel, and a backlight device mounted facing a rear surface of the liquid crystal display panel, wherein the backlight device comprises, a light guide plate having a light incident face and a light emission face opposite to the rear surface of the liquid crystal display panel, a rotary member adapted to be rotated along a rotary shaft thereof and disposed opposite to the light incident face of the light guide plate, a rotary drive mechanism for rotating the rotary member, a plurality of mercury-free fluorescent lamps, each comprising an arc tube mounted on the rotary member so as to extend substantially parallel to the rotary shaft, a mercury-free

discharge medium consisting essentially of a rare gas sealed within the arc tube, and first and second electrodes for exciting the discharge medium, the mercury-free fluorescent lamps being capable of emitting light of respectively different colors, and the emitted light entering the light guide plate through the light incident face and emerging ~~form~~ from the light emission face, and a power feed control mechanism for applying a voltage to the first and second electrodes of each of the mercury-free fluorescent lamps.

Please amend the paragraph [0046] as follows:

[0046] The light guide plate 11 is generally formed by molding a transparent synthetic resin such as polycarbonate, or epoxy. The light guide plate 11 includes a light incident face 11a through which light enters, a light emission face 11b from which the light exits, and an opposite face 11c which is located on the side opposite to the light emission face 11b. In the present embodiment, one of the four end faces is used as the light incident face 11a. A reflecting film 21 is formed on other faces than the light incident face 11a and light emission face 11b so that the entering light can be efficiently reflected for illumination. The light emitted from each of the mercury-free fluorescent lamps 14R, 14G, and 14B enters the light guide plate 11 at the light incident face 11a, diffuses in the the light guide plate 11, and then emerges as an ~~unformed~~ uniformed light from the light emission face 11b for projection toward the liquid crystal display panel 3.

Please amend the paragraph [0051] as follows:

[0051] In the present embodiment, the rotary drive mechanism 13 includes a motor 28 such as a stepping motor. The motor 28 is driven by a motor driver 29. The end portion of the rotary shaft 23 projecting through the support plate ~~28A~~26A is connected to the output

shaft 28a of the motor 28 by a connecting tube ~~30~~ 31 made of an elastic material such as rubber. The rotation of the output shaft 28a of the motor 28 is transmitted to the rotary shaft 23 via the connecting tube ~~30~~ 31. The reason that the connecting tube ~~30~~ 31 is made of an elastic material is to prevent the rotary shaft 23 from wobbling when the output shaft 28a and the rotary shaft 23 are not properly aligned.

Please amend the paragraph [0054] as follows:

[0054] The discharge medium 32 consists essentially of a rare gas, and does not contain mercury. The phrase "does not contain mercury" or mercury-free means that an amount of the mercury is small enough so that the rare gas discharge mainly generates the ~~light~~ light. At least one kind of gas selected from the group consisting of krypton gas, argon gas, helium gas, and xenon gas can be used as the discharge medium 32. The wavelength of the ultraviolet light emitted from xenon gas is close to that of the ultraviolet light emitted from mercury. Accordingly, when xenon gas is used as the discharge medium 32, a phosphor layer similar in composition to that for a mercury fluorescent lamp can be used.

Please amend the paragraph [0065] as follows:

[0065] As shown in Fig. 4, a single conducting contact 51 is provided on the side peripheral surface of the other cylindrical member (second cylindrical member) 41B. The conducting contact 51 is formed continuously around the entire circumference of the cylindrical member 41B. The common conductor 34b of the external electrode 34 of each of the mercury-free fluorescent lamps 14R to 14B is connected to the conducting contact 51 via a conducting path 145 provided on the end face of the cylindrical member 41B. A terminal (second terminal) ~~51~~ 52 for connecting the conducting contact 51 to the power feed circuit

16 is disposed adjacent to the cylindrical member 41B. This terminal ~~51~~ 52 is made at one end to constantly contact the conducting contact 51 and is connected at the other end to the power feed circuit 16 via a wire.

Please amend the paragraph [0066] as follows:

[0066] When the motor 28 is driven, the rotation of the output shaft 28a is transmitted via the connecting tube ~~30~~ 31 to the rotary shaft 23 of the rotary member 12, causing the rotary member 12 to rotate. As the rotary ~~shat-~~ shaft 23 rotates, the cylindrical members 41A and 41B rotate about the rotary shaft 23. As the cylindrical member 41A rotates, the tip of the terminal 46 comes into contact with one of the three conducting contacts 43A to 43C in accordance with the rotational angular position of the cylindrical member 41A. When the terminal 46 comes into contact with one of the conducting contacts 43A to 43C, a voltage is applied from the power feed circuit 16 to the internal electrode 35 of a corresponding one of the mercury-free fluorescent lamps 14R to 14B. When the tip of the terminal 46 is located in any one of the spaces 44A to 44C, voltage is not applied to the internal electrode 35 of any one of the mercury-free fluorescent lamps 14R to 14B. On the other hand, since the conducting contact 51 on the cylindrical member 41B is always or continuously in contact with the terminal 52, the external electrodes 34 of the mercury-free fluorescent lamps 14R to 14B are always connected to the power feed circuit 16. Accordingly, as the rotary member 12 rotates, the three mercury-free fluorescent lamps 14R to 14B are activated to generate light in sequential and intermittent manner corresponding to rotational angular position of the rotary member 12. The conducting contacts 43A to 43C on the cylindrical member 41A and the corresponding terminal 46 are arranged so that, when any one of the mercuryless fluorescent lamps 14R to 14B is positioned opposite the light entrance face 11a of the light guiding plate 11 by the rotation of the rotating member 12, the external electrode 34 of that fluorescent lamp is connected to the power feed circuit 16. Therefore, each of the mercury-free fluorescent lamps 14R to

14B respectively corresponding to red, green, and blue colors is turned on only when it comes to the position opposite the light incident face 11a of the light guide plate 11, and is turned off when it is outside that position. Power consumption can thus be reduced by activating each mercury-free fluorescent lamp only when it needs to emit light toward the liquid crystal display panel 3 through the light guide plate 11, rather than constantly keeping the mercury-free fluorescent lamps 14R to 14B on.

Please amend the paragraph [0071] as follows:

[0071] Fig. 12 shows an alternative example of the power feed control mechanism. The conducting contacts 43A to 43C corresponding to the respective mercury-free fluorescent lamps 14R to 14B are arranged so as to located shifted with each other in the direction of the rotary shaft 23. When viewed in the extending direction of the rotary shaft 23, the conducting contacts 43A to 43C corresponding to the respective mercury-free fluorescent lamps 14R to 14B partially overlap each other. Further, since the conducting contacts 43A to 43C are displaced from each other, the tip of the terminal 46 is made correspondingly wider. In the alternative example of Fig. 12, when the terminal ~~26~~ 46 is positioned in the overlapping portion of the adjacent conducting contacts 43A to 43C (the portion indicated at reference numeral 62 in Fig. 12), the corresponding two of the mercury-free fluorescent lamps 14R to 14B are turned on simultaneously.

Please amend the paragraph [0076] as follows:

[0076] Fig. 18 shows a liquid crystal display apparatus 2 equipped with a rear lighting type backlight device 1 according to a third embodiment of the present invention. The face 11c on the side opposite to the light emission face 11b of the light guide plate 11 functions as the light incident face, and the rotary member 12 with the mercury-free fluorescent lamps

14R to 14B mounted thereon is disposed facing this light incident face 11c. Reflecting films 21 are formed on both edge faces ~~11b~~ 11a and 11d of the light guide plate 11. Since the opposite face 11c has a larger area than the edge faces ~~11b~~ 11a and 11d, it is desirable that the recessed portions 12a to 12c of the rotary member 12 is each formed in the shape of an arc having a wider opening than the recessed portions 12a to 12c of the first embodiment (see Figs 1 and 2) so that the light emitted from the respective mercury-free fluorescent lamps 14R to 14B efficiently enters the opposite face 11c. In Fig. 18, reference numeral 66 is a limiting plate for limiting the range over which the light from the respective mercury-free fluorescent lamps 14R to 14B spreads. In other respects, the construction of the third embodiment is the same as that of the first embodiment, and the same component elements are therefore designated by the same reference numerals and will not be further described here.

Please amend the paragraph [0082] as follows:

[0082] Fig. 21 shows a liquid crystal display apparatus 2 provided with a backlight device 1 according to a fifth embodiment of the present invention. The single rotary member 12 disposed facing the light ~~emission~~ incident face ~~11b~~ 11a, an edge face of the light guide plate 11, is provided with four recessed portions 12a, 12b, 12c, and 12d, and has a shape similar to a symbol of plus when viewed in the extending direction of the rotary shaft 23. Four mercury-free fluorescent lamps 14R, 14G, 14B, and 14W respectively emitting light of red, green, blue, and white colors are mounted on the respective recessed portions 12a to 12c.

Please amend the paragraph [0083] as follows:

[0083] Using the white mercury-free fluorescent lamp 14 in addition to the red, green, and blue mercury-free fluorescent lamps 14R to 14B provides greater freedom in light intensity adjustment. Referring to Fig. 22A, when the red, green, and blue mercury-free fluorescent lamps 14R to 14B are turned on in the same period, the resulting light is perceived as white light by the human eye (see reference numeral 70 in ~~Fig. 4~~ Fig. 22A). The intensity of this white light is approximately equal to the sum of the intensity of the red, green, and blue lights. Referring to Fig. 22B, when the white mercury-free fluorescent lamp 14 is turned on in addition to the red, green, and blue mercury-free fluorescent lamps 14R to 14B in the same period, the perceived intensity of the white light increases by an amount equal to the intensity of the light emitted from the mercury-free fluorescent lamp 14W. Accordingly, the perceived intensity of the white light can be adjusted by turning on or not turning on the white mercury-free fluorescent lamp 14W in the same period. Further, as shown in Fig. 22C, when the red mercury-free fluorescent lamp 14R and the white mercury-free fluorescent lamp 14W are turned on in the same period, the perceived intensity of the red color increases. In other respects, the construction and operation of the fifth embodiment are the same as those of the first embodiment, and the same component elements are therefore designated by the same reference numerals and will not be further described here.